

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 03/14525

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 H04M1/57 H04M3/436

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 370 235 B1 (HEINER JEFFREY N) 9 April 2002 (2002-04-09)	1-5, 7-11, 13-15, 17, 19
Y	abstract; figure 1 column 1, line 25 - column 3, line 34	6, 12, 16
Y	US 2002/067809 A1 (WON JOUNG-KYU) 6 June 2002 (2002-06-06) abstract paragraph '0012! - paragraph '0020!	6, 12, 16
A	W0 97/20423 A (BELL COMMUNICATIONS RES) 5 June 1997 (1997-06-05) the whole document	1-19
A	US 5 467 388 A (BROHAN LIAM P ET AL) 14 November 1995 (1995-11-14) the whole document	1-19

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

\*A\* document defining the general state of the art which is not considered to be of particular relevance

\*E\* earlier document but published on or after the international filing date

\*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

\*O\* document referring to an oral disclosure, use, exhibition or other means

\*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

9 July 2004

Date of mailing of the international search report

20/07/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
 NL - 2280 HV Rijswijk  
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
 Fax: (+31-70) 340-3016

Authorized officer

Tillgren, M

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/14525

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6370235	B1	09-04-2002	NONE	
US 2002067809	A1	06-06-2002	KR 2002044052 A RU 2221345 C2	14-06-2002 10-01-2004
WO 9720423	A	05-06-1997	WO 9720423 A1 US 5930700 A	05-06-1997 27-07-1999
US 5467388	A	14-11-1995	NONE	